Wayne-Dalton Corp.
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(888) 827-3667
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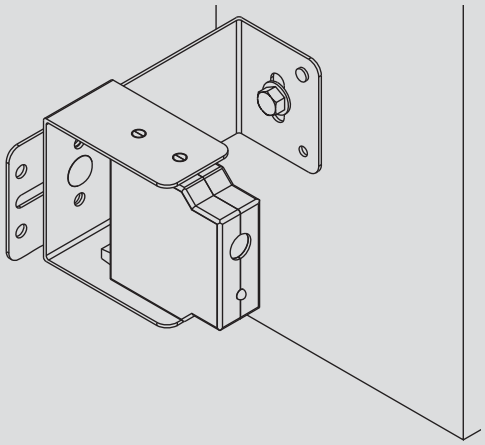
Photoelectric Safety Sensors

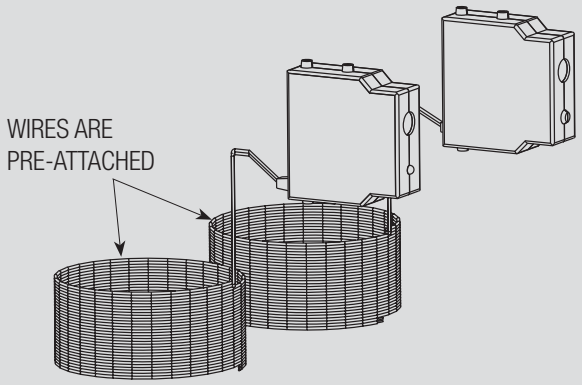
Installation Instructions
and Owner's Manual

Opener Models:

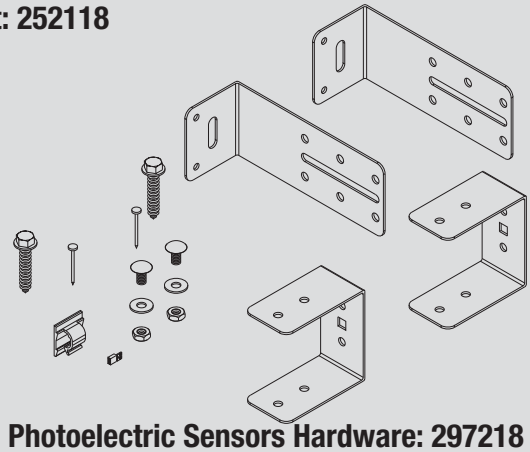
Torsion idrive® models: 3651-372, 3750-372.
Prodrive™/Quantum®/Classicdrive® models: 3220C, 3221C, 3222C, 3224C, 3320B, 3322B, 3324B,3012, 3014, 3016, 3018, 3211, 3212, 3213, 3214, 3312, 3313, 3314, 3316, 3412, 3414, 3512, 3514.
DoorMaster™ models: BDOR-2000 & BIRW-2000
idrive® models: 3660-372, 3661-372, 3662-372, 3760-372, 3751-372.



Photoelectric Sensor Kit: 252118



Photoelectric Sensors: 318873
(1) Sender w/Wire
(1) Receiver w/Wire



Photoelectric Sensors Hardware: 297218
(2) 5/16 x 1-1/2" Lag Screws
(2) 1" Flat Head Nails
(2) 1/4-20 x 1/2" Carriage Bolts, Washers & Nuts
(2) Wall Mounting Brackets
(2) "U" Brackets
(1) Power Cord Clip (adhesive back)
(1) Jumper

Important Notice!

DOOR OPENER WILL NOT OPERATE PROPERLY UNTIL PHOTOELECTRIC SENSORS ARE INSTALLED AND PROPERLY ADJUSTED! DO NOT OPERATE DOOR OPENER UNTIL IT IS FULLY INSTALLED, ADJUSTED AND YOU ARE INSTRUCTED TO DO SO!

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Part No: 306736 Rev2 7/10/2007

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THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO AVOID POSSIBLE INJURY OR DEATH.

⚠ WARNING DISCONNECT ALL POWER FROM GARAGE DOOR OPENER BEFORE SERVICING OR INSTALLING ACCESSORY PRODUCTS.

IMPORTANT SAFETY INSTRUCTIONS FOR INSTALLATION AND USE

READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.

DO NOT USE SENSITIVITY ADJUSTMENT TO COMPENSATE FOR A POORLY OPERATING DOOR. THIS WILL INTERFERE WITH THE PROPER OPERATION OF THE SAFETY REVERSE MECHANISM.

DO NOT CONNECT OPENER TO ELECTRICAL OUTLET UNTIL INSTRUCTED TO DO SO.

INSTALLATION AND WIRING MUST COMPLY WITH LOCAL BUILDING AND ELECTRICAL CODES. CONNECT THE POWER CORD TO A PROPERLY GROUNDED OUTLET. DO NOT REMOVE ROUND GROUND PIN FROM POWER CORD.

AFTER INSTALLING OPENER, THE DOOR MUST REVERSE WHEN IT CONTACTS A 1 -1/2” HIGH SOLID TEST OBJECT ON THE FLOOR.

OPEN DOOR MUST NOT CLOSE AND CLOSING DOOR MUST OPEN IF PHOTOELECTRIC SYSTEM IS OBSTRUCTED BY 6” HIGH OBJECT, USING TEST PROCEDURE DESCRIBED IN STEP 4.

DO NOT WEAR RINGS, WATCHES OR LOOSE CLOTHING WHEN INSTALLING OR SERVICING A GARAGE DOOR SYSTEM. USE A STURDY, NONMETALLIC STEP LADDER AND WEAR EYE PROTECTION.

Step 1: Photoelectric Safety Sensor Bracket Installation

⚠ WARNING DISCONNECT ALL POWER TO GARAGE DOOR OPENER BEFORE SERVICING OR INSTALLING ACCESSORIES OR PHOTOELECTRIC SAFETY SENSORS. FOR ALL OPENERS, UNPLUG 120 V AC POWER CORD FROM RECEPTACLE. FOR DOORMASTER, ALSO UNPLUG TELEPHONE CORD TYPE COMMUNICATIONS CABLE.

Select a mounting position, no more than 5 inches above the floor to center line of wall mounting bracket. The sending and receiving units should be mounted inside the door opening to minimize any interference by the sun. However, the sensors should be mounted as close to the door track or inside edge of the door as possible to offer maximum entrapment protection. It is very important that both wall brackets be mounted at the same height for proper alignment.

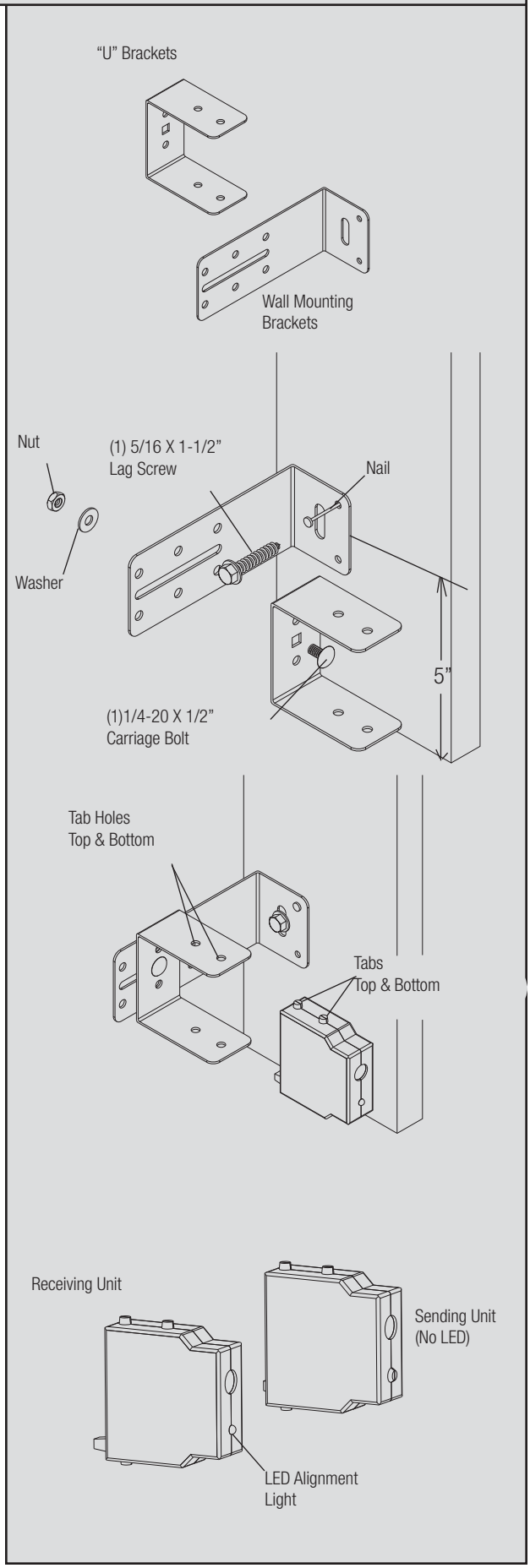
Identify which side of the garage door opening (if any) is "likely" to be exposed to sunlight. Since sunlight may affect photoelectric sensors, mount the sending unit (not the receiving unit) on the side of the door opening most exposed to the sun.

The brackets may be temporarily mounted to the jamb with a 1" flat head nail (provided) using the small hole above the slot. Using two 5/16 x 1-1/2" lag screws (provided), permanently mount the wall mounting brackets to both door jambs. In some installations it may be necessary to attach a wooden spacer to the wall to achieve the required clearance.

Attach the "U" brackets to the wall brackets with a 1/4-20 carriage bolt, washer and nut (provided). Insert the bolt from the inside of the "U" bracket and hand tighten only at this time.

NOTE: If wires must be lengthened or spliced into prewired installation, use wire nuts or suitable connectors.

Attach the sending and receiving units to the "U" brackets by inserting their tabs into the respective holes.



Step 2: Photoelectric Safety Sensor Wiring Installation For:

Prodrive™/Quantum®/Classicdrive® models: 3220C, 3221C, 3222C, 3224C, 3320C, 3320B, 3322B, 3324B, 3012, 3014, 3016, 3018, 3211, 3212, 3213, 3214, 3312, 3313, 3314, 3316, 3412, 3414, 3512, 3514.

Uncoil wires from the photoelectric sensors and route wires up the garage walls and along ceiling towards the right side of the opener (see Fig. 1). Route wires behind torque tube and tack wires in place with insulated staples (not supplied).

Take care to run wires in a location where they will not interfere with the operation of the door and do not staple through wire.

IMPORTANT! KEEP SENDER/RECEIVER WIRES AWAY FROM MOVING COMPONENTS.

Connect photoelectric sensors to opener per diagram (Fig. 1). Shorten the wires as necessary and separate the wire ends. Strip about 1/2" of insulation off each wire and attach the solid color wires to the COM terminal and the wires with a black stripe to the OBS terminal. Tighten terminal screws securely, using a phillips head screw driver. Be sure to observe polarity. Pull on external wires to test for secure connection. Check that the wires are stapled in place and staples have not cut wire insulation. Reconnect the power to the garage door opener. Proceed to Step 3.

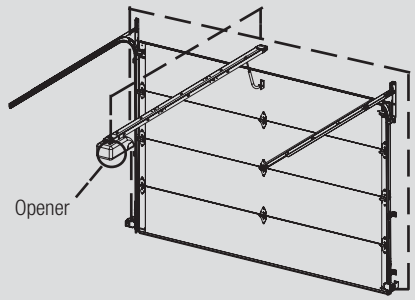
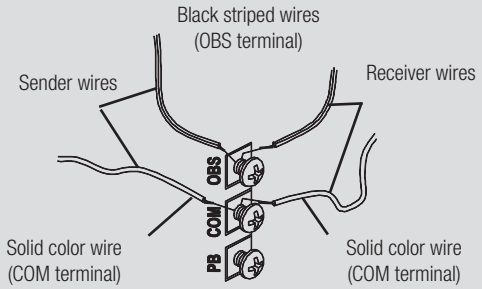


FIG. 1 Wire Routing



Prodrive™/Quantum®/Classicdrive®

DoorMaster™ models: BDOR-2000 & BIRW-2000

Uncoil wires from the photoelectric sensors and route wires up the garage walls and along door towards the right side of the opener (see Fig. 2). Route wires behind torque tube and tack wires in place with insulated staples (not supplied).

Run wires in a location where they will not interfere with the operation of the door and do not staple through wire.

IMPORTANT! KEEP SENDER/RECEIVER WIRES AWAY FROM MOVING COMPONENTS.

Connect photoelectric sensors to opener per diagram (Fig. 2). Shorten wires as necessary and separate wire ends. Strip about 1/2" of insulation off each wire and attach the solid color wires to the COM terminal and the wires with the black stripe to the OBS terminal. Tighten terminal screws securely, using a flatblade screwdriver. Be sure to observe polarity. Pull on external wires to test for secure connection. Check that the wires are stapled in place and staples have not cut wire insulation. Remember to connect telephone type cord for Doormaster™ installation. Once wires are connected, switch the jumper (model BDOR-2000 only) from "Disable" to "Enable" by pulling jumper off pins 2 and 3 and reinstalling jumper on pins 1 and 2.
NOTE: The jumper is set to disable from the factory.

Reconnect the power to the garage door opener. Proceed to Step 3.

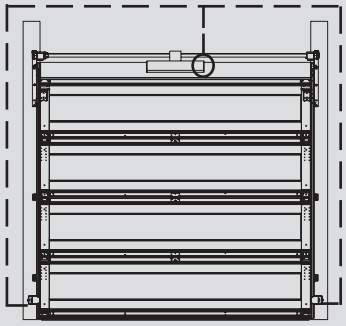
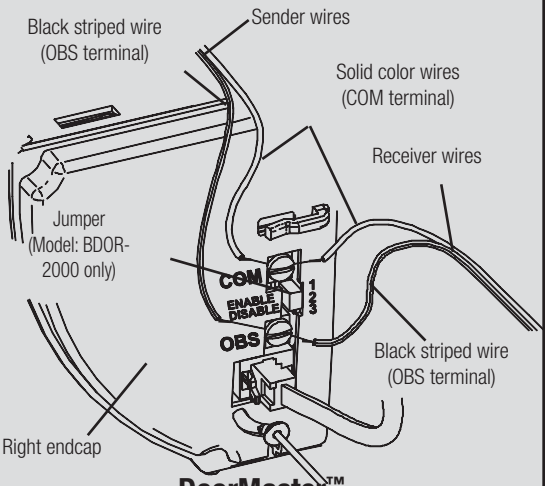


FIG. 2 Wire Routing

NOTE: If wires must be lengthened or spliced into prewired installation, use wire nuts or a suitable connector. Pay attention to polarity.



DoorMaster™

Step 2: Photoelectric Safety Sensor Wiring Installation For:

idrive® for Torquemaster® models: 3660-372, 3661-372, 3662-372, 3760-372, 3751-372.

Uncoil wires from photoelectric sensors and route wires up garage wall and along door header towards the right side of the opener (see Fig. 3). Route wires behind torque tube and tack wires in place with insulated staples (not supplied).Take care to run wires in a location where they will not interfere with the operation of the door and do not staple through wire.

Connect photoelectric sensors to the opener terminal block on right side of the opener. Separate wire ends and strip about 1/2" of insulation off each of the wire ends. Insert a 3/32" (2.5mm) max. width flatblade screwdriver into the lower hole #1 of the terminal block. Twist screwdriver to open wire clamp in upper hole #1 of terminal block. Insert both sender and receiver solid white wires into upper hole #1 until the wires bottom out and release screwdriver tension. Insert and twist screwdriver in lower hole #2 and insert both sender and receiver wires (white with black stripe) into upper hole #2 until wires bottom out and release screwdriver tension. Be sure to observe polarity. Once wires are connected, install jumper through the front opener cover on to the pins labeled PE.

IMPORTANT! KEEP SENDER/RECEIVER WIRES AWAY FROM MOVING COMPONENTS.

Pull on external wires to test for secure connection. Check that the wires are stapled in place and staples have not cut wire insulation. Reconnect the power to the garage door opener. Proceed to Step 3.

Torsion idrive® models: 3651-372, 3750-372.

Uncoil wires from safety sensors and route wires up garage wall and above torsion tube towards the right side of the opener.

Route wires behind torsion tube and tack wires in place with insulated staples (not supplied).

NOTE: If wires must be lengthened or spliced use wire nuts or suitable connectors.

Expose the terminal block by loosening the set screw and sliding the right hand gear assembly to the right.

Using a pair of needle nose pliers, gently pull terminal block from right hand side of opener. Separate wire ends and strip about 1/2" of the insulation off each of the wire ends.

Using a flatblade screwdriver to loosen the screw above Hole #1 of the terminal block. Insert both sender and receiver solid white wires into Hole #1. Tighten the screw above Hole #1 till both sender and receiver solid white wires are secured tightly. Insert both sender and receiver wires (white with black stripe) into Hole #2 by the same process. After wires are secured in terminal block, snap terminal block back in right hand side of opener.

IMPORTANT! KEEP SAFETY SENSOR WIRES AWAY FROM MOVING COMPONENTS.

Keep the safety sensor wires straight and organized by wrapping them around the backside of the opener and securing them using the sensor wire clip (adhesive backed). (Ensure the surface the wire clip is attached to is clean and oil free).

Position right hand gear assembly so that it is 1/8" from the opener. Right hand gear assembly square head bolt should be hand tightened, then with a wrench tighten 1 to 1 - 1/4 turns to secure gear assembly.

Check that the wires are stapled in place and staples have not cut wire insulation. Reconnect the power to the opener. Proceed to Step 3.

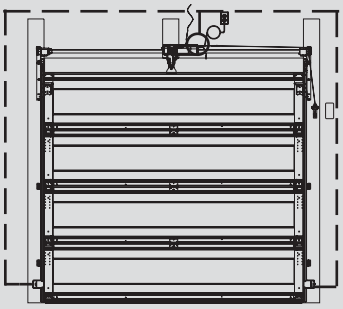
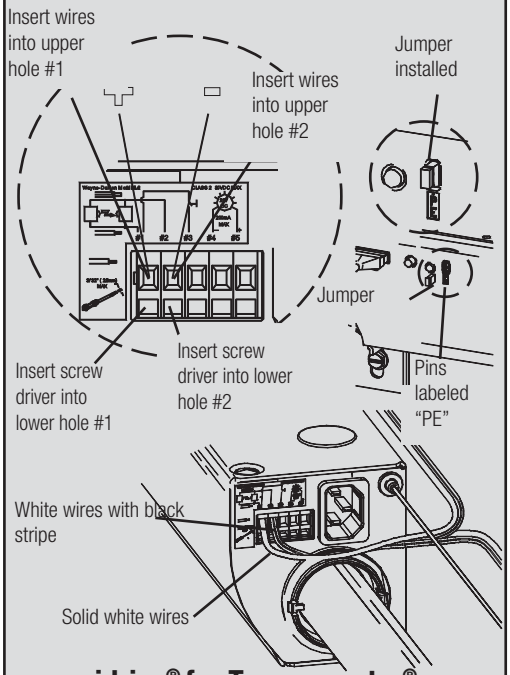


FIG. 3 Wire Routing


Insert wires into upper hole #1
Insert wires into upper hole #2
Jumper installed
Jumper
Insert screw driver into lower hole #1
Insert screw driver into lower hole #2
Pins labeled "PE"
White wires with black stripe
Solid white wires

idrive® for Torquemaster®

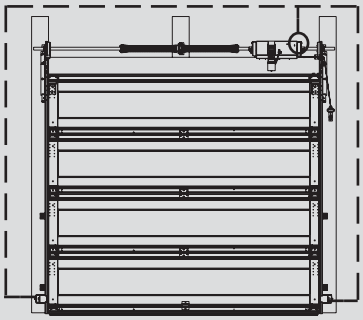
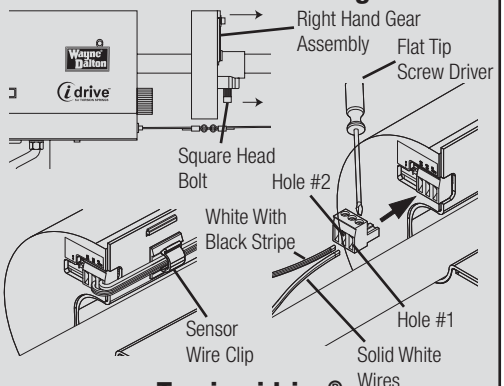


FIG. 4 Wire Routing



Torsion idrive®

Step 3: Photoelectric Safety Sensor Alignment

IMPORTANT! THIS INFRARED SAFETY SENSOR SENDS AN INVISIBLE BEAM OF LIGHT FROM THE SENDING UNIT TO THE RECEIVING UNIT ACROSS THE DOOR OPENING. THE DOOR OPENER WILL NOT OPERATE UNTIL THE SAFETY SENSOR IS CONNECTED TO THE POWER UNIT AND PROPERLY ALIGNED. IF THE INVISIBLE BEAM OF LIGHT IS MISALIGNED OR OBSTRUCTED, AN OPEN DOOR CANNOT BE CLOSED BY THE TRANSMITTER OR A MOMENTARY ACTIVATION OF THE WALL MOUNTED PUSH BUTTON. HOWEVER, THE DOOR MAY BE CLOSED BY HOLDING YOUR FINGER ON THE WALL PUSH BUTTON (CONSTANT PRESSURE) UNTIL THE DOOR TRAVELS TO A FULLY CLOSED POSITION.

FIG.5

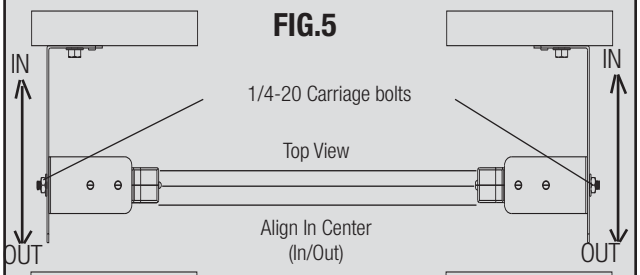
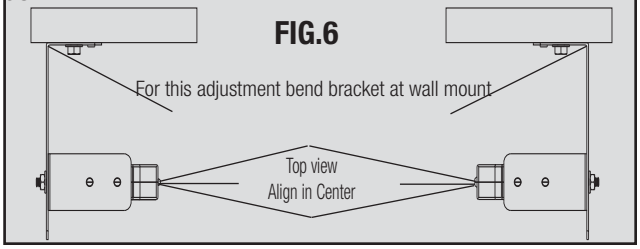


FIG.6



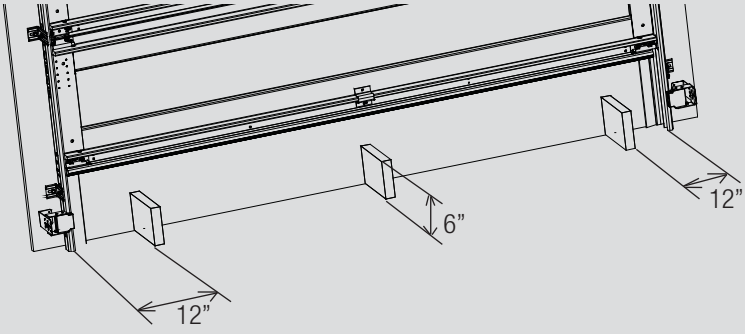
⚠WARNING FAILURE TO MAKE ADJUSTMENTS TO ALIGN AND UNOBSTRUCT INFRARED SAFETY SENSORS BEAM, COULD RESULT IN SEVERE OR FATAL INJURY.

At this point you will be able to activate the opener; it will open, but will not close the door unless the sensors are aligned and unobstructed. The safety sensors can be aligned by moving the sending and receiving units in or out (see Fig. 5) until the alignment light on the receiving unit comes on. The 1/4-20 carriage bolt can be loosened to move the unit in or out, as required. If you have difficulty aligning beams, check that both brackets are mounted at the same height and remount if necessary. Additional minor adjustments can be made by lightly bending the mounting brackets (see Fig. 6).Once the alignment light comes on, tighten all bolts and mounting screws. Finish securing all wiring. Make sure not to break or pierce any of the wires. Loop and secure any extra wire. Using the wall station's up/down button, activate the opener and check that it will operate through full open and close cycles.

Step 4: Photoelectric Obstruction Sensing Test

Starting with the door in the fully open position, place a 6" high object on the floor progressively one foot from the left side of the door, center of door and one foot from the right side of the door. (Fig. 7) In each position, activation of the opener with the wallstation up/down button should cause the door to move no more than one foot, stop and then reverse to fully open position. The same 6" high object when placed on the floor, while door is closing, should also cause the door to reverse.

FIG. 7



⚠WARNING WHEN PERFORMING THIS PART OF THE TEST, DO NOT PLACE YOURSELF UNDER DESCENDING DOOR, OR SEVERE OR FATAL INJURY MAY RESULT.

⚠WARNING IF THE OPENER DOES NOT RESPOND PROPERLY, TO THIS TEST, HAVE A QUALIFIED SERVICE PERSON MAKE NECESSARY ADJUSTMENTS/REPAIRS. FAILURE TO MAKE ADJUSTMENTS COULD RESULT IN SEVERE OR FATAL INJURY.

IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING TO REDUCE THE RISK OF SEVERE INJURY OR DEATH: Please thoroughly read safety rules on Page 2 and the following operating instructions. Operate only when opener is properly adjusted and the door is visible and unobstructed.

⚠ **Always keep moving door insight and keep people and objects away from the door until it is completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.**

⚠ **Use the emergency release only when the door is closed. Use caution when using this release with door open. Weak or broken springs may cause the door to fall rapidly, causing serious injury or death.**

⚠ **KEEP GARAGE DOORS PROPERLY BALANCED. See owner's manual. An improperly balanced door could cause severe injury or death. Have a qualified service person make repairs to cables, spring assemblies and other hardware.**

⚠ **Never let children operate or play with door controls. Keep remote control away from children**

⚠ **Test door opener monthly. Open garage door MUST NOT close and closing door MUST open if photoelectric obstruction sensors system is obstructed by 6" high object, using test procedure described in Step 4. If opener fails this test, disconnect immediately and call for technical support. Malfunctioning opener can cause severe injury or death.**

⚠ **Test door opener monthly. The garage door MUST reverse on contact with a 1-1/2 inch high object (or a 2 x 4 board laid flat) on the floor. On Prodrive™, Quantum® and Classicdrive® openers, if adjusting either the force or the limit of travel, retest the door opener. Failure to adjust the opener properly could cause severe injury or death.**

Photoelectric Safety Sensors

ONE YEAR LIMITED WARRANTY

Wayne-Dalton Corp. (The Manufacturer) warrants the PHOTOELECTRIC SAFETY SENSORS will be free from defects in materials and workmanship for a period of ONE YEAR from the date of installation, provided they are properly installed, maintained and cared for under specified use and service.

This Warranty extends to the original homeowner, providing the PHOTOELECTRIC SAFETY SENSORS are installed in his/her place of primary residence. It is not transferable. The warranty applies to residential property only and is not valid on commercial or rental property.

NO EMPLOYEE, DISTRIBUTOR, OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THE FOREGOING WARRANTIES IN ANY WAY OR GRANT ANY OTHER WARRANTY ON BEHALF OF MANUFACTURER.

The Manufacturer shall not be responsible for any damage resulting to or caused by its products by reason of installation, improper storage, unauthorized service, alteration of products, neglect or abuse, any acts of nature beyond Manufacturer's control (such as, but not limited to, lightning, power surges, water damage, etc.), or attempt to use the products for other than the customary usage or for their intended purposes. The above warranty does not cover normal wear or any damage beyond Manufacturer's control or replacement labor.

THIS WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS WARRANTY ACT. NO WARRANTIES, EXPRESSED OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), SHALL EXTEND BEYOND THE APPLICABLE TIME PERIOD STATED IN BOLD FACE TYPE ABOVE.

Claims for defects in material and workmanship covered by this warranty shall be made in writing, within the warranty period, to the dealer from whom the product was purchased. Manufacturer may either send a service representative or have the product returned to the Manufacturer at Buyer's expense for inspection. If judged by Manufacturer to be defective in material or workmanship, the product will be replaced or repaired at the option of the Manufacturer, free from all charges except authorized transportation and replacement labor.

THE REMEDIES OF BUYER SET FORTH HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER REMEDIES, THE LIABILITY OF MANUFACTURER, WHETHER IN CONTACT, TORT, UNDER ANY WARRANTY OR OTHERWISE, SHALL NOT EXTEND BEYOND ITS OBLIGATION TO REPAIR OR REPLACE, AT ITS OPTION, ANY PRODUCT OR PART FOUND BY MANUFACTURER TO BE DEFECTIVE IN MATERIAL OR WORK SHALL NOT BE RESPONSIBLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE.

This Warranty gives you specific legal rights and you may have other rights, which may vary from state to state. However, some states do not allow limitation on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above limitations or exclusions may not apply to you.

Questions??
For quick answers and helpful advise, call
Wayne-Dalton Customer Service
(888) 827-3667

FCC and IC Statement

FCC Regulatory Information:
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC Regulatory Information:
This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regula-tions. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interfer-ence by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

WARNING: Changes or modifications to this unit not expressly approved by party responsible for compliance could void user's authority to operate this equipment.